

Energy Conservation Audit & Disclosure Ordinance



First Year Status Report

Ordinance No. 20091106-47

City Code 6-7, June 2009



Residential



- Austin home sales: 9,549
- 3,999 ECAD exempted
- 4,862 ECAD audits received
 - Energy audit :
 - Weatherization
 - Duct Leakage
 - Attic Insulation
 - Solar Shading
 - Identifying opportunities for upgrading HVAC systems, home appliance, Austin Water qualified conservation measures



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Residential Audit Results



- Ducts leak twice the code standard 10%
- Older homes need 10 inches of insulation
- 96% of audited homes received at least one energy efficiency recommendation:
 - 78% need in-home weatherization
 - 58% need solar shading
 - 68% need HVAC air duct system renovation and sealing
 - 79% need additional attic insulation

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Expected Savings



- 4,862 Audited Homes
- Potential annual savings:
 - 7,788,000 kWh/yr
 - \$723,650 per year
 - 3.9 MW saved
 - Equivalent to powering 650 homes
 - Emissions:
 - 4,897 Tons of CO₂/yr



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Improvements Created



- Auditors certification and training
 - RESNET & BPI Affiliates:
 - Private Training Centers
 - Community College
 - Grant Funded Programs
- ECAD database
- Public information
 - Website, marketing collateral, advertising, press briefings, real estate group presentations, and 311/AE call center



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Austin City Council Resolution



- City Council Resolution Goal for First Year:
 - 25% of Homes Sold to Receive Retrofits
 - Currently tracking 10% participation
- Overall increase in Rebate Program



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Multifamily Properties



- Requires energy audit performed no later than June 1, 2011
- Multifamily property profile
 - Number of properties: 1,411
 - Number of properties needing audit: 1,196

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Multifamily Properties



- High usage properties must implement energy efficiency improvements
- Energy utilization index (EUI) benchmark
 - Six categories were created:
 - All Electric or Gas and Electric built prior to 1985
 - All Electric or Gas and Electric built between 1985 and 2001
 - All Electric or Gas and Electric built between 2001 and present

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Multifamily EUI



Preliminary energy utilization index (EUI)

kWh/Usage per Sq. Ft.	<i>Built prior to 1985</i>	<i>Built between 1985 and 2001</i>	<i>2001 to Present</i>
All Electric	12.1	13.2	10.8
Gas & Electric	10.4	9.1	8.1

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Preliminary Results



High Use	<i>Built prior to 1985</i>	<i>Built between 1985 and 2001</i>	<i>2001 to Present</i>
All Electric	44	8	3
Gas & Electric	8	3	0

- 66 high use properties
- Average size: 505 square foot
- Currently verifying data

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Audit Approach for Multi-family Properties



- ECAD enhanced rebates to encourage participation
 - Audit data points similar to rebate data collection
- ECAD auditors training
 - Duct remediation/sealing
 - Attic insulation
 - Solar shading
 - Demand response: water heater timers, energy miser, thermostats
 - Lighting
 - HVAC
 - Reflective roofing

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Commercial Building Energy Ratings



- Report building rating by June 1, 2011
 - Two building energy rating systems
 - EPA Energy Star Portfolio Manager
 - Austin Energy's "Business Audit" tool
- www.austinenergy.com/go/businessaudit

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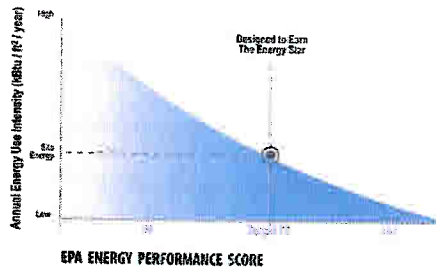


Portfolio Manager



Types of Commercial Buildings:

- Bank/Financial Institution
- Courthouse
- Data Center
- Hospital (acute care and children's)
- Hotel
- House of Worship
- K-12 School
- Medical Office
- Municipal Wastewater Treatment Plant
- Office
- Residence Hall/Dormitory
- Retail Store
- Supermarket
- Warehouse (refrigerated and non-refrigerated)



Austin Ranks 18th in US Cities for **Energy Star Rated Building**
Disadvantage is that it doesn't rate all buildings.

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Portfolio Manager



• Ratings received:45

- Highest rating 95
- Lowest rating 22
- Variances: 3 for high energy use



•Energy Star Buildings (Not Reported to AE):

- 32 building are listed as ES in 2010
- 44 building are listed as ES in 2009



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Lessons Learned

- ECAD energy audit not onerous
- Outreach and awareness campaign
- Audit form technical and difficult to interpret
- Point of violation difficult to enforcement residential
- Not all properties are clearly addressed
 - Condominiums
 - Commercial buildings
- Need more comprehensive database

